immediate response capability, the fault condition can do no damage, as the blocking immediately begins again, and the system thus fully protects the ballast from destruction.

In the event that the blocking signal is repeatedly triggered so as to have been executed a user defined number of times, then the microcontroller software interprets the situation as a nontransient fault, and a software resolution is executed. Such a software solution is well known in the art, and consists of some type of modification or cessation of the driving signals $G1_{HB}$ 301 and $G2_{HB}$ 302. Such a solution could be a switching frequency increase, a pulse width decrease, or shutting down completely the ballast. Such ultimate resolution will be user defined, and can be a combination of any or all of these possibilities.

As well, numerous operating states can be defined and programmed, each with a different power level, frequency and pulse width being sent to the load, where each state can be set to trigger upon a defined number of executions of the blocking signal in the prior state. In this way the user has great flexibility in tailoring an appropriate response, and operating the lamp at some self stabilizing power level, inasmuch as the blocking signal mechanism fully protects the ballast, and can be repeatedly triggered. Because the system of the invention affords a greater time to address a confirmed nontransient fault condition (while fully protecting the ballast from destruction throughout that time via the blocking signal), the response to such a real fault condition can be programmed in, and executed by, software.

Thus, the fast reaction time of hardware can be combined with the flexibility of software implementation to increase the resolution at which a panic condition is recognized as "real" or nontransient, and maintain full protection of the ballast and its components during the recognition process.

While the foregoing describes the preferred embodiment of the invention, it will be understood by those of skill in the art that various modifications and variations may be utilized, such

as, for example, using the invention in circuits that have any waveform type as driving outputs, or as precursors to them, both ac and dc, and the extension of the circuit of the preferred embodiment to any number of output signals and driven devices. Such modifications are intended to be covered by the following claims.